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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/564,023

01/09/2006

Yasuhiro Sasaki

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23389

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04/07/2008

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EXAMINER

BUDD, MARK OSBORNE

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2834

MAIL DATE

DELIVERY MODE

04/07/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/564,023	Applicant(s) SASAKI ET AL.	
	Examiner Mark Budd	Art Unit 2834	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 February 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2 and 4-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 6,11 and 13-15me is/are allowed.
- 6) ☒ Claim(s) 1,2,4,5,7-10,12 and 16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 2834

And claims 1,2,4,5, 9, 10 and 12 are rejected under 35 USC 103 (a) as being unpatentable over Ogawa in view of Miller. Ogawa in figures 8-13 teaches a piezoelectric Bender bimorph supported on one end (#73) and carrying a load (#72) on the other end. It is noted that "central ceramic layer #95 is not polarized" (column 6 lines 3-19). As best shown in figure 13, both terminals are located on the upper surface. Gullah does not teach providing insulating layers on the top and bottom surfaces of the bender. However, Miller (note figures 5 and 8) explicitly teaches providing ceramic cover plates on the top and bottom surfaces of a piezoelectric bending bimorph and able to protect the outer electrodes and prevent flash over. For at least these reasons it would have been obvious to one of ordinary skill in the art to place an outer ceramic layer on the surfaces of Ogawa. And note that Miller also teaches on polarized sections in the middle of the bimorph. For example in figure 5 between the lowest electrode connected to terminal Q and the highest electrode connected to terminal R there are at least two intermediate electrodes not connected to terminal P during the polling process, thus leaving unpolarized piezoelectric material between these 'floating' electrodes and any adjacent electrodes.

Claims 7, 8 and 16 are rejected under 35 USC 103 (a) has been unpatentable over Oak 01 in view of Miller as applied to claim 1 above and further in view of Maichl. These claims and that the piezoelectric element is used to drive an elastic element.

Maichl teaches that piezoelectric elements are often used to drive an elastic body.

Determining the ultimate use (or load) for the piezoelectric element would be within the

skill expected of the routineer depending on application dictates. Also, to use the specific piezoelectric transducer of e.g. Ogawa (a bimorph) as a substitute for the unimorph used by Maichlin in order to provide a larger displacement would have been obvious to one of ordinary skill in the art.

Claims 6, 11 and 13-15 are allowed.

Applicants comments/arguments are noted, but are found to be unpersuasive. Not only does Miller teach unpolarized regions between the piezoelectrically active areas, but so does Ogawa. Providing protection layers for their known, expected benefit (protection) would have been obvious to one of ordinary skill in the art.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark Budd whose telephone number is 571-272-2019. The examiner can normally be reached on Monday-Thursday from 6 a.m. to 4 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren Schuberg, can be reached on 571-272-2044. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Mark Budd
Primary Examiner
Art Unit 2834

/Mark Budd/
Primary Examiner, Art Unit 2834

<div>Application Number</div> <div></div>	Application/Control No.	Applicant(s)/Patent under Reexamination	
	10/564,023	SASAKI ET AL.	
	Examiner	Art Unit	
	Mark Budd	2834	